

USDA Satellite Imagery Archive Update on Activities December 6, 2009

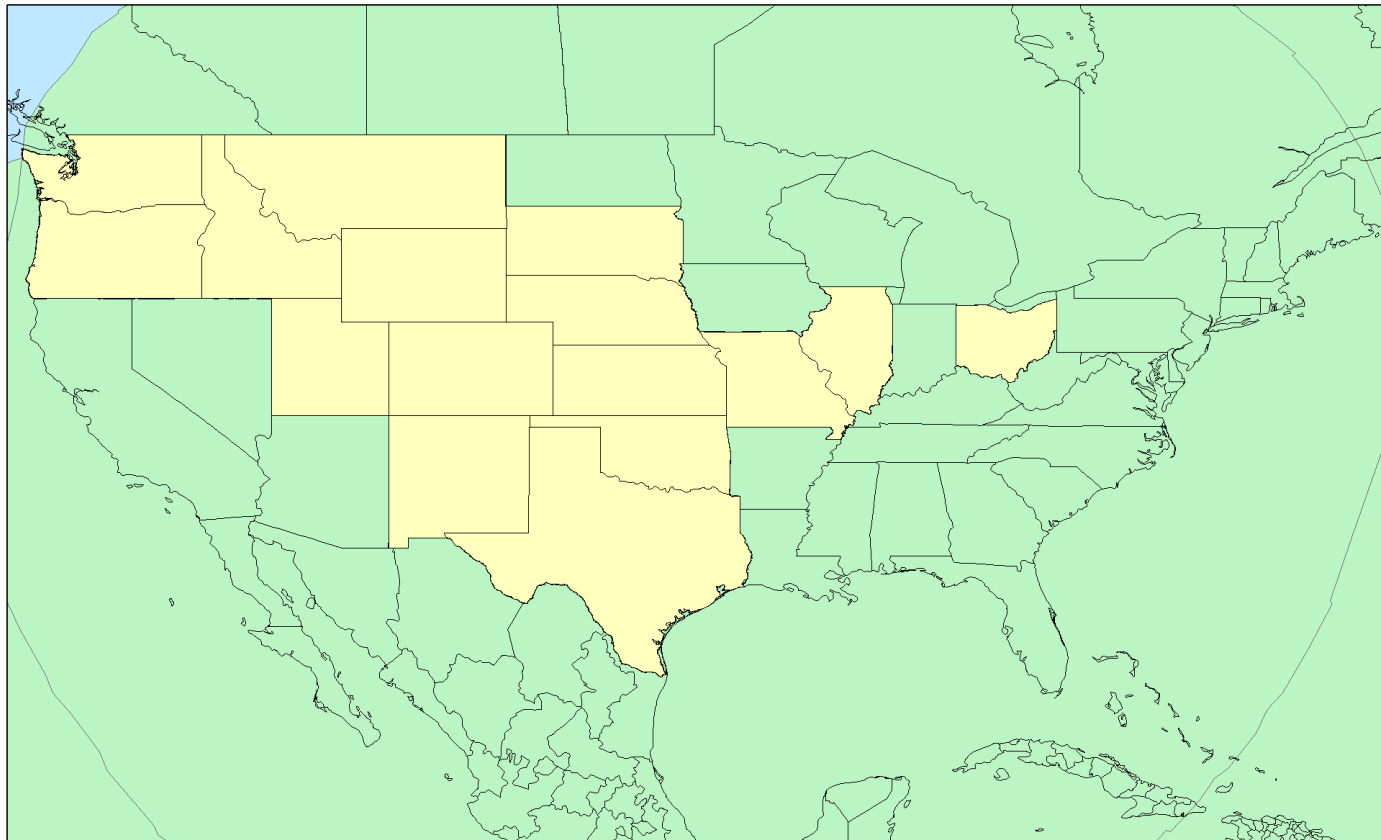
1. Update on FY2010 US CONUS Coverage
 - “leaf off” coverage in 2nd year.
2. Update on the Prime Vendor Contract
 - New products and new vendors
3. USDA Satellite Imagery Archive WebEx
 - 1st quarterly meeting via WebEx

Update for FY2010 US CONUS Coverage

- RMA received funds for pasture rangeland forage (PRF) insurance expansion.
 - Second year of “leaf off” collection
- Collection starts October 1, 2009 and will continue to:
 - March 31, 2010 using RMA funds
 - and Sept. 30, 2010 using CCC funds.
- Same price same delivery terms as last year.
 - \$892.50 / orthorectified quad for Resourcesat-1 AWiFS
 - No later than 3 days after date of acquisition
- RMA wants to cover the PRF states and provide minimal coverage for rest of CONUS.

Coverage Plans for “Leaf-Off” in FY2010

Pasture, Rangeland, and Forage for Crop Insurance Expansion

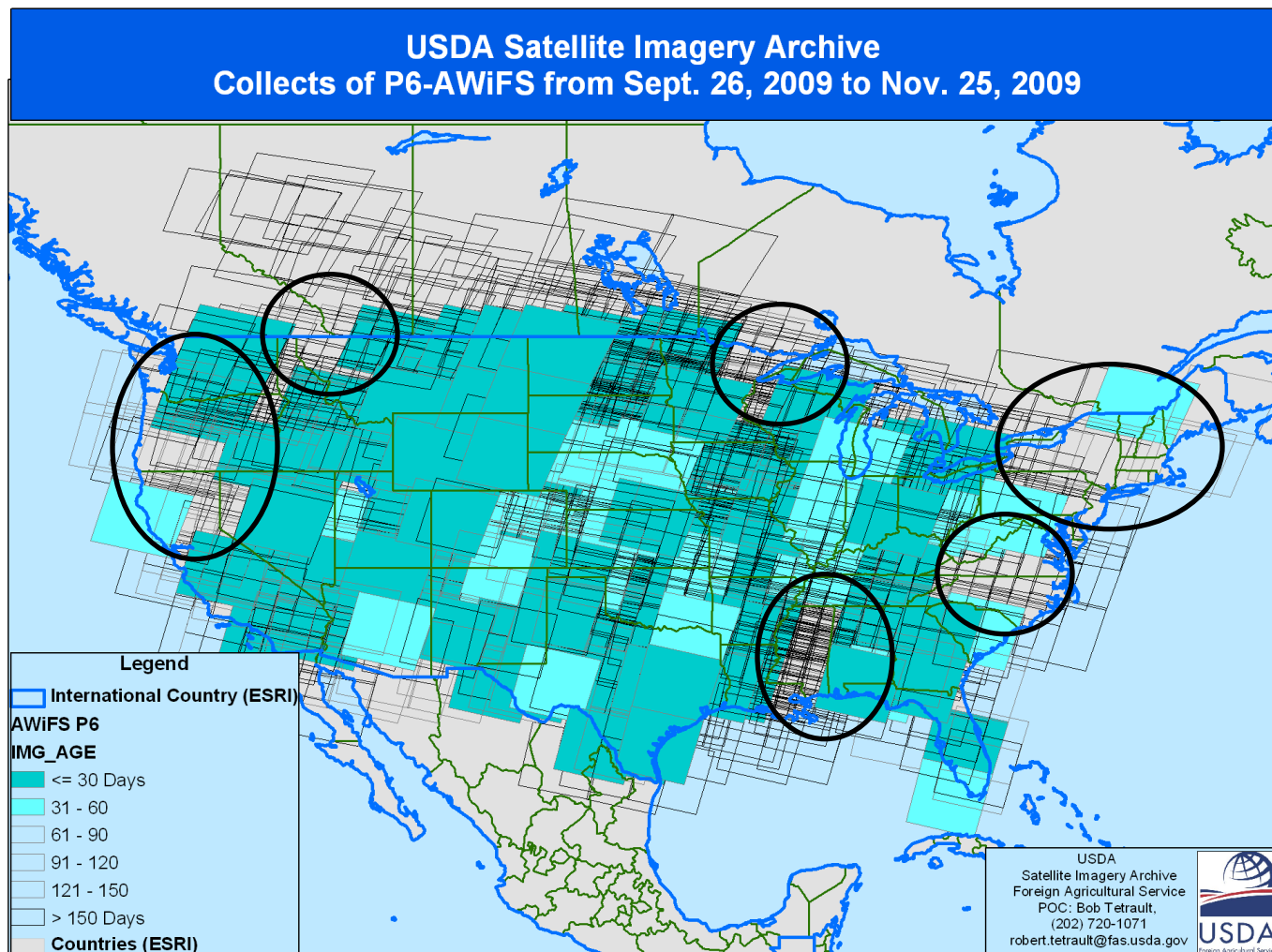


Legend



-Double-click here to enter text-

“Leaf Off” AWiFS Collections at the USDA-SIA



- FY2010 AWiFS collection is proceeding as planned.
- Shortage of imagery in several places.
- Focus on Oregon, Idaho, & Montana.

Resourcesat-1 AWiFS Highlights and Problems

- USDA is acquiring year-around coverage of CONUS at 56 m resolution.
- Temporal frequency is higher during Spring-Summer months.
- AWiFS data is delivered quickly (no later than 3 days after acquisition).
- AWiFS data suitable for multiple applications, such as NASS' Cropland Data Layer.
- Continued solar panel problems is restricting power.
- On-board storage can no longer be used (per ISRO's request).
- Live downlink when in site of the ground station at Norman, OK.

A teal-colored rectangular callout box with a black border. A thin black line extends from the left side of the box, pointing towards the text "AWiFS data suitable for multiple applications, such as NASS' Cropland Data Layer." in the list above.

**Resourcesat-2
planned launch
in 2nd quarter,
2010**

Update on USDA-SIA Prime Vendor Contract

- Satellite Imagery Archive has a prime vendor, Arctic Slope Regional Corporation—Management Services (ASRC-MS).
- ASRC-MS has established commercial contracts with several providers of imagery and geospatial products.
- New products and/or new vendors can be added when needed. And when requested by participating agencies.

Update on the Prime Vendor Contract

Current Vendors	Satellite Data and Products	Changes/ <i>Planned Additions</i>
MDA RadarSat	Landsat-5, ENVISAT, RadarSat-1, RadarSat-2	
MDA Federal	Landsat-5 &7, ENVISAT, EO-1, EROS-1A, ASTER	
Eurimage	Landsat-5, ENVISAT	
SPOT Image	SPOT 2&4, SPOT-5, Formosat-2	
GeoEye	IKONOS-2, Orbview-3, GeoEye-1	
Digital Globe	QuickBird, WorldView-1	<i>WorldView-2</i>
EoTEC	CartoSat-1, Resourcesat-1, IRS-1C/1D	
GDA	Processed imagery products: reflectance, cloud detection, vegetation indices, mosaics, and composites	<i>Processing for SPOT</i>
GCS	Image identity tracing through GeoMarc software	
TerraGo	Image delivery system through GeoPDF software	
CompassData	GCP (points)	
Genesys Int'l.	Processed imagery products.	

Update on Prime Vendor Contract: New Vendors/ New Products

Priority	Satellite System	Launch Date	Vendor	Comments
1 DONE	RapidEye-A,B,C,D,E	Aug. 2008	RapidEye	6.5 m res. multi-spectral (blue, green, red, red-edge, near IR); 77 km swath width
2 DONE	DMC-SLIM6	multiple	DMCii	22 & 32 m res. Multi-spectral (blue, green, red, near IR); 650 km swath width

- DMCii and RapidEye have been added to the Prime Vendor Contract, products identified and prices established.
- Quality of data remains a concern.
 - DMC-32 and DMC-22 satellites have an earlier than Landsat overpass, making comparisons between satellites difficult.
 - RapidEye data has problems:
 - Band 1 has spatial noise, creating a “herringbone” effect. Possibly in band 2.
 - Sensor’s gain setting producing large and potentially erroneous pixel values. Histogram stretches are distorted, however, one can remove the outlier values.

Upcoming USDA-SIA WebEx

1st Satellite Imagery Archive Members Webex

Date: Thursday, December 17th, 2009

- **Time:** Eastern Standard: 12:00PM-1:30PM
- Central Standard: 11:00AM-12:30PM
- Mountain Standard: 10:00AM-11:30AM
- Pacific Standard: 9:00AM-10:30AM
- Schedule times are listed by Eastern Standard Time Format:
- **PURPOSE:** Provide new SIA additional news, highlight SIA Members current applications, collect SIA members data/service requests.
- **WEBEX:** Access and log in information will be emailed under separate cover
- **COORDINATORS:** Global Marketing Insights, Inc.
 - Sherry Loy, Program Manager
 - Dr. Shawana Johnson, President
- **HOST:** Robert Tetrault, SIA Manager, USDA FAS
- For questions please contact
 - Sherry Loy at sherryloy@globalinsights.com, or
 - Bob Tetrault at Robert.tetrault@fas.usda.gov.

RapidEye Data

After looking more carefully at the data it is not as bad as first thought.

1) There are some seriously skewed large pixel values which make just about any default screen look-up table stretches look bad. It may have something to do with the sensor's gain setting. If one "clips" the outlier spectral values things look better.

2) Band1 seems to suffer from some sort of spatial noise. It's hard to describe but I would call it a subtle "herringbone" effect that is zig-zagging back and forth across the image. It may be in band 2 as well, but to a lesser extent. The other bands seem fine.

So, if one applies a reasonable contrast stretch and doesn't look at band 1 things look decent.

-Dave

David M. Johnson, Geographer
National Agricultural Statistics Service
703.877.8000 x169
www.nass.usda.gov

Crop Explorer

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Related Sites

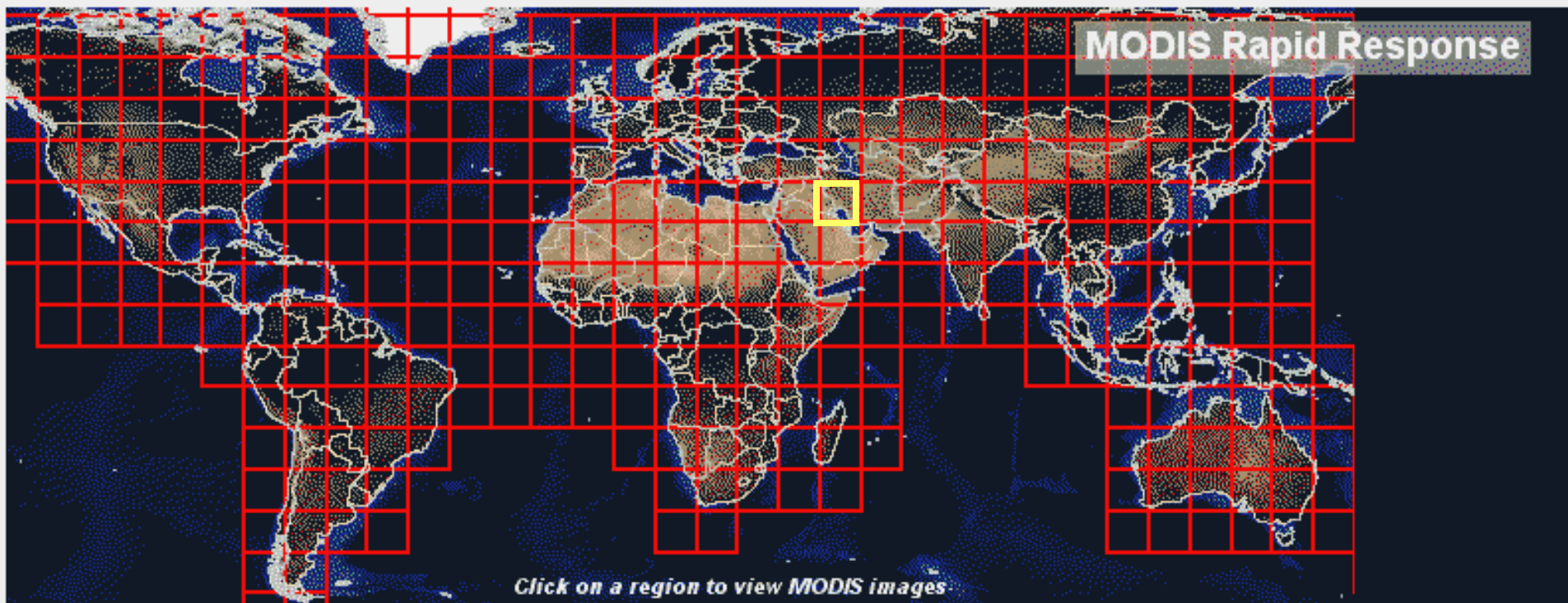
- [Agricultural Production](#)
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Crop Explorer

Toolbox Weather Soil Moisture Vegetation Index Satellite Data Growing Season

World — MODIS Image Gallery System Status

Click on a region to see MODIS images



- MODIS Imagery is available for your use!

r13c25

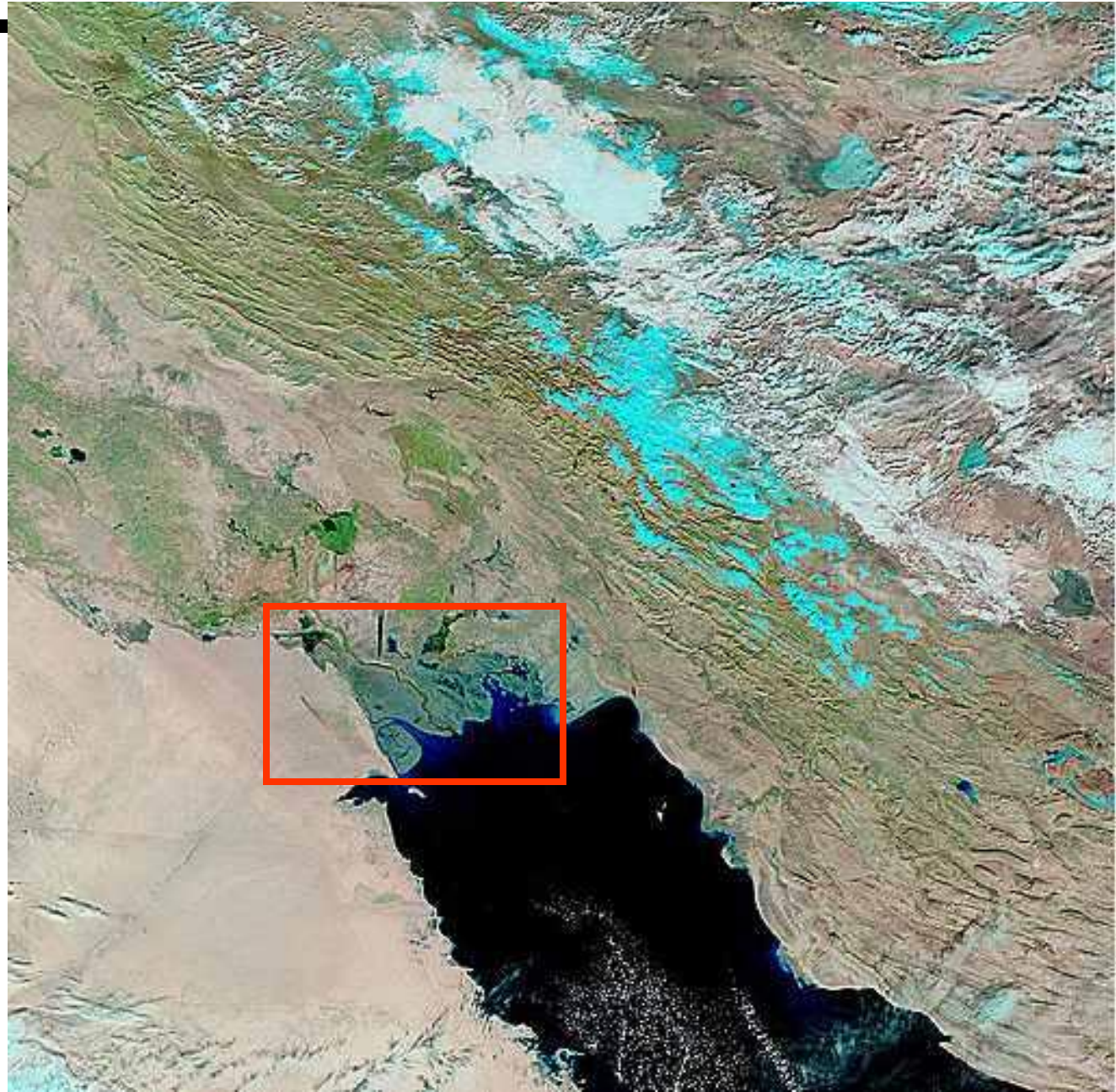
(2009/336 - 12/02/09)

Satellite: terra.721 — Pixel size: 2km

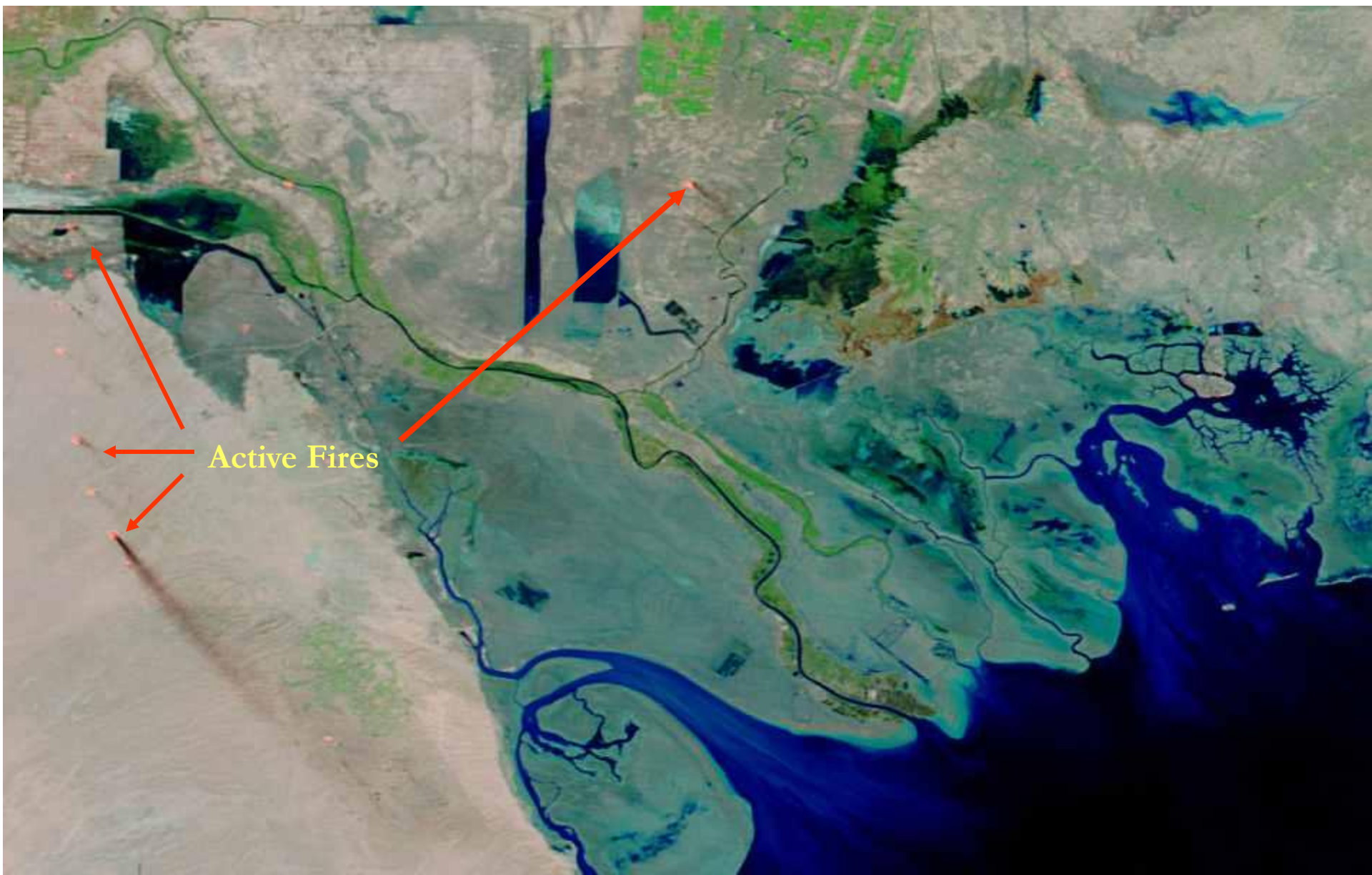
[Return](#)

[Alternate pixel size: 250m | 1km](#)

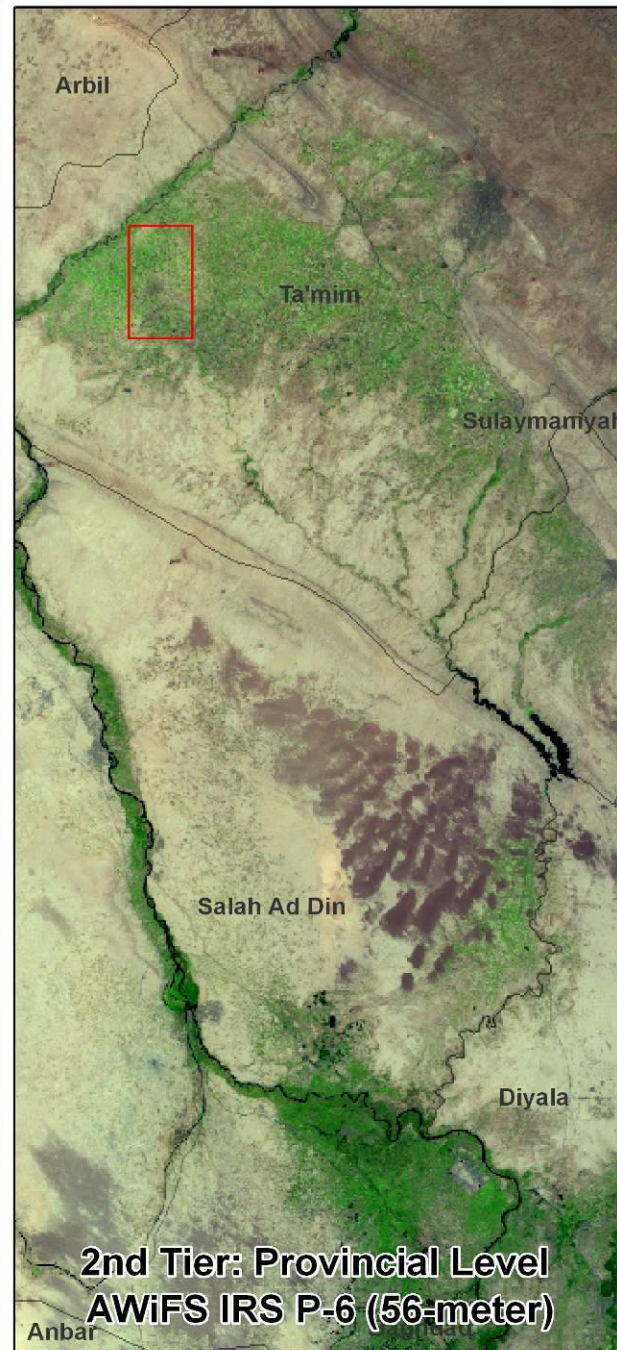
Same Day Imagery



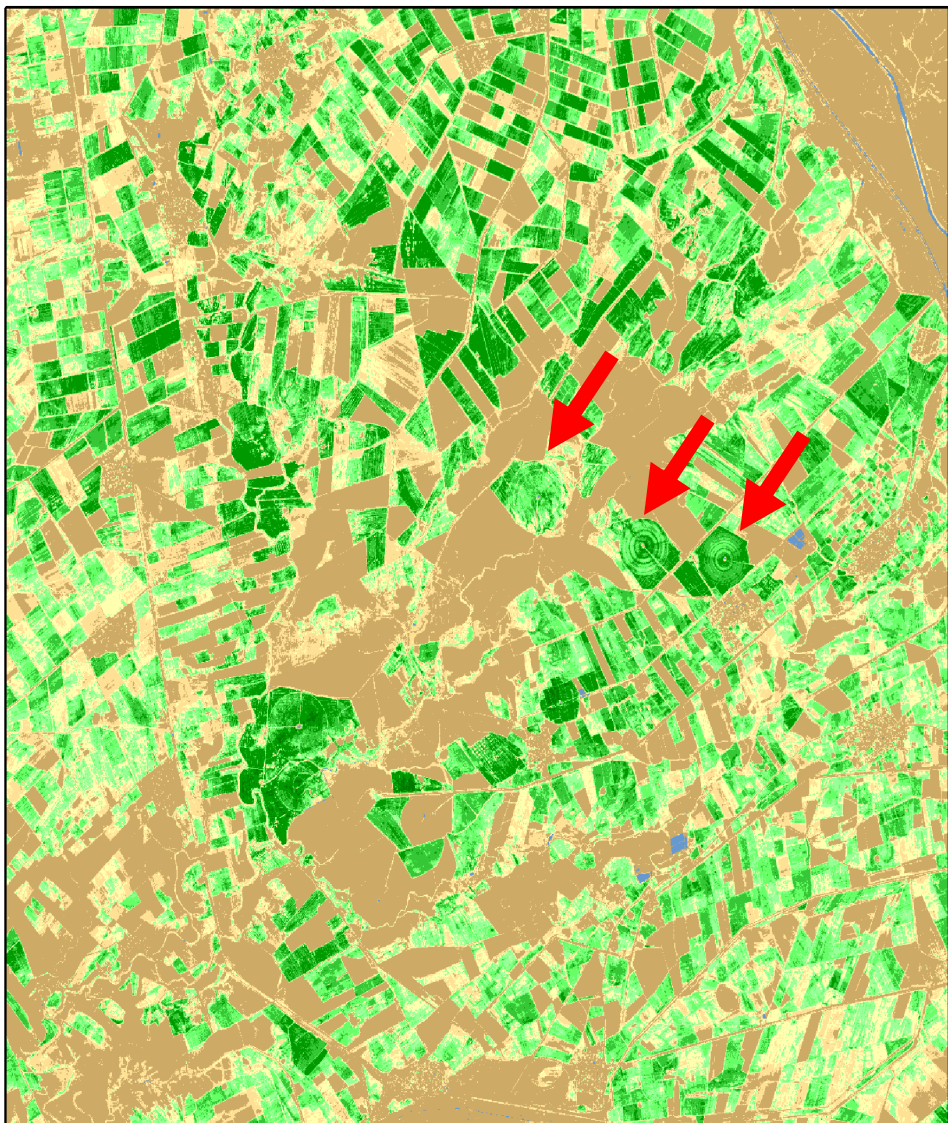
1/11/2010



Three Tier Agricultural Monitoring: Regional to Local Scale



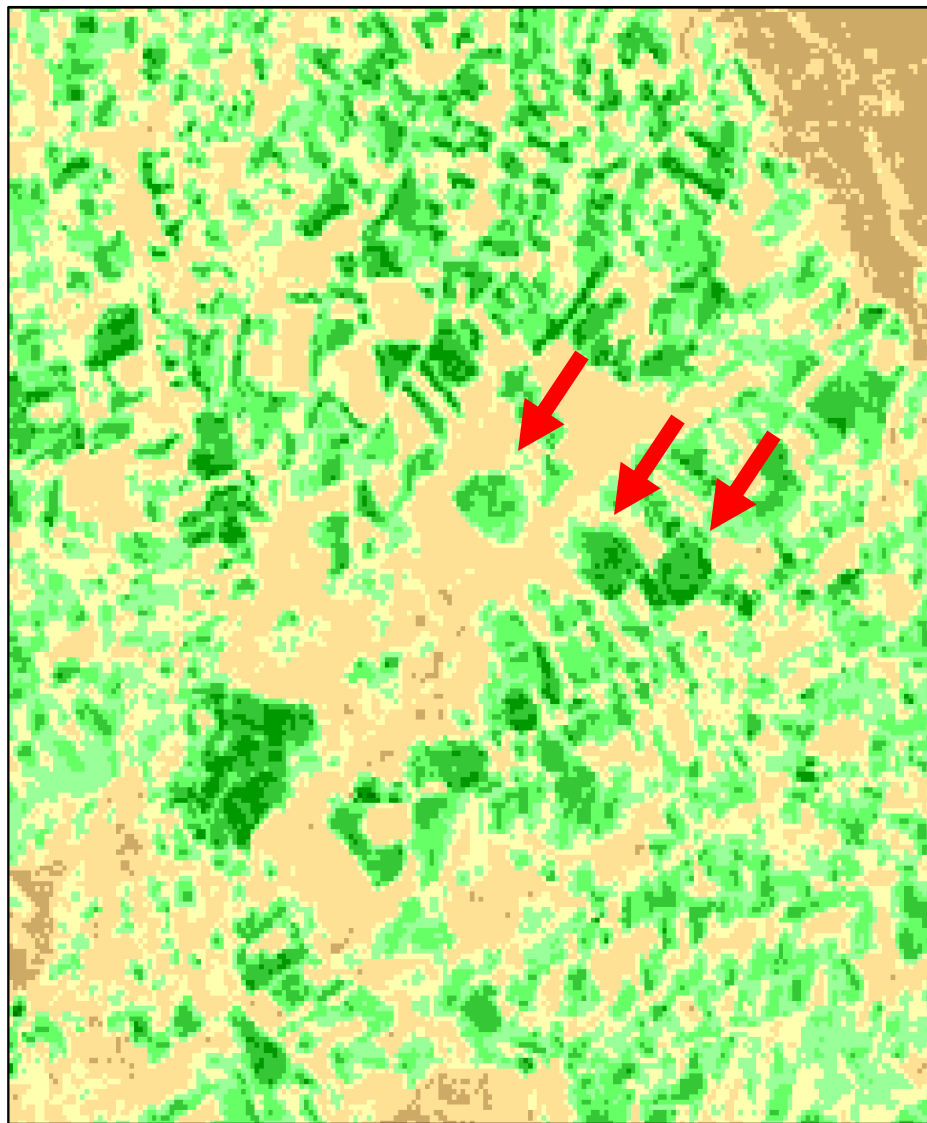
Crop vigor comparison: Quickbird & AWiFS



Quickbird 2.4 meter resolution April 1, 2008



Active center pivot irrigation



AWiFS 56 meter resolution April 13, 2008

End Notes

- FAS has crop condition guide.
- I have the FAS ASRC contract with me!





March of the Emperors

